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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/955,371	09/18/2001	Guy C. Erb	45591/SAH/X2	8349
35114	7590	05/05/2005	EXAMINER	
ALCATEL INTERNETWORKING, INC. ALCATEL-INTELLECTUAL PROPERTY DEPARTMENT 3400 W. PLANO PARKWAY, MS LEGL2 PLANO, TX 75075			BHANDARI, PUNEET	
			ART UNIT	PAPER NUMBER
			2666	

DATE MAILED: 05/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/955,371

Applicant(s)

ERB ET AL.

Examiner

Puneet Bhandari

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/21/2003</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims **23,24 & 26** are objected to because of the following informalities:

Regarding claims **23 & 24**, the use of word "can" (on line 4, claim 23 and on line 5 claim 24) does not recite positive limitation it is suggested that this limitation should be re-written in positive form.

Regarding claim **26**, it should depend on claim 25, rather than claim 1, in-order to have proper antecedent basis. If this is the intent, appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims **1-26** are rejected under 35 U.S.C. 102(e) as being anticipated by Hama (US 2004/0202171).

Regarding claim **1**, *L2/L3 network* is anticipated by the "*MPLS network*" in Fig. 8. Also disclosed in page 2, paragraph 14, lines 1-2, comprising:

A plurality of MPLS-enabled bridges is anticipated by *"edge routers 111 to 114"* disclosed on page 5, paragraph 70, lines 7-14;

An MPLS-enabled router is anticipated by *"edge routers 111 to 114"* disclosed on page 5, paragraph 70, lines 7-14; and

A plurality of label switched paths interconnecting respective bridges and a router is anticipated by *"Label Switched paths are setup between MPLS routers (PE A), (PE B), (PE C)"* in Fig 8.

Wherein the bridges bridge local protocol data units is anticipated by *"bridging packets belonging to same group (local protocol data unit)"* disclosed on page 1, paragraph 005, lines 1-10 and switch non-local protocol data units to the router on respective ones of the plurality of label switched paths, whereupon the router routes the non-local data units is anticipated by *"switching the packet belonging to the different group (non local protocol data units) using the router"* disclosed on page 2, paragraph 11, lines 1-8 or on page 1, paragraph 005, lines 10-12.

Regarding claim 2, the label switched paths over which to send the non-local protocol data units are selected as a function of virtual local area network associated with each non-local protocol data unit is anticipated by *"MPLS method is used to construct paths for transmitting data packets belonging to different VLANs"* as disclosed on page 2, paragraph 11-paragraph 13.

Regarding claim 3 & 12, determination whether the protocol data units are non-local is made as a function of MAC address in each protocol data unit is anticipated by

"based on destination MAC address the VLAN packets are assigned labels" as disclosed on page 7, paragraph 87, lines 1-14.

Regarding claims **4 & 13**, the router capable of routing the protocol data units using IPX, IPv4, Ipv6 or AppleTalk protocol is anticipated by *"environment where user is capable of using protocol other than IP, namely protocols such as IPX, or Appletalk"* as disclosed on page 4, paragraph 35, lines 1-4.

Regarding claims **5 & 14**, the router capable of removing an MPLS label from respective one of the protocol data units is anticipated by *"MPLS network routes the MPLS packet to the target receiving edge router over the preset route while replacing the forwarding label"* as disclosed on page 8, paragraph 98, lines 1-5.

Regarding claim **6 & 15**, the router removing the MPLS label from the respective protocol data unit prior to routing if MPLS label indicates that the penultimate hop pop function of popping the MPLS label is to be performed is anticipated *"receive-side edge router checks to see whether the MPLS packet has arrived and if the MPLS packet has arrived edge router removes the MPLS label attached"* as disclosed on page 8, paragraph 99, lines 1-4.

Regarding claim **7 & 16**, the router removes the MPLS label from the respective protocol data unit prior to routing if the lookup of MPLS label indicates that the MPLS label is to be popped is anticipated by *"once the MPLS packet has arrived at the edge router the MPLS label is removed before routing is to appropriate VLAN"* as disclosed on page 8, paragraph 99, lines 4-16.

Regarding claim **8 & 17**, each label switched path comprises one or more label switching router is anticipated by *"Fig. 12 path between the routers PE A and PE B or PE C"*

Regarding claim **9 & 18**, the router operates as an ingress label switching router is anticipated by *"MPLS router PE A"* as disclosed in Fig 8, as an egress label switching router is anticipated by *"MPLS router PE C"* as disclosed in Fig 8, and as a label switching router is anticipated by *"MPLS router PE B"* disclosed in Fig. 8, at substantially same time at substantially line rate is anticipated by *"MPLS network"* as disclosed in Fig 8.

Regarding claim **10**, a method of forwarding protocol data unit in an L2/L3 network comprising a plurality of MPLS enabled bridges and MPLS-enabled router interconnected over a plurality of label switched paths is anticipated by *"Label Switched paths are setup between MPLS routers"* disclosed Fig.8; the method comprising the steps of:

Bridging local protocol data units from the bridges is anticipated by *"bridging packets belonging to same group (local protocol data unit)"* disclosed on page 1, paragraph 005, lines 1-10

Switching non-local protocol data units from the bridges to the router over respective ones of the plurality of label switched paths is anticipated by *"Label Switched paths are setup between MPLS routers (PE A), (PE B), (PE C)"* in Fig 8.

Routing the non-local protocol data units using the router is anticipated by *"switching the packet belonging to the different group (non local protocol data units)"*

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using the router" disclosed on page 2, paragraph 11, lines 1-8 or on page 1, paragraph 005, lines 10-12.

Regarding claim 11, the label switched paths over which to send the non-local protocol data units are selected based on a virtual local area network associated with each non protocol data unit is anticipated by *"MPLS method is used to construct paths for transmitting data packets belonging to different VLANs"* as disclosed on page 2, paragraph 11-paragraph 13.

Regarding claim 19, a method of forwarding a packet in MPLS network comprising an MPLS-enabled router and plurality of MPLS-enabled VLAN bridges is anticipated by *"network of VLANs and an MPLS network"* disclosed in Fig 1 or page 5, paragraph 70, lines 1-3, the method comprising the steps of:

Attaching a first MPLS label to the packet in one of the VLAN bridges in accordance with a VLAN associated with the packet is anticipated by *"transmitting edge router converts the VLAN packet to MPLS packet"* disclosed on page 5, paragraph 70, lines 7-11;

Sending the packet to the router over first MPLS tunnel from said one of the VLAN bridges is anticipated by *"transmitting the MPLS packet"* disclosed on page 5, paragraph 70, lines 7-14;and

Routing the packet to another one of the VLAN bridges is anticipated by *"outputs the VLAN packets to the prescribed VLAN"* disclosed on page 5, paragraph 70, lines 7-14.

Regarding claim **20**, the method further comprising the step of label swapping the first MPLS label with a second MPLS label prior to forwarding the MPLS packet wherein the packet is forwarded over a second MPLS tunnel is anticipated by "packet is forwarded in MPLS network while the value of the label field is pushed, swapped and popped" as disclosed on page 3, paragraph 0020, lines 5-8.

Regarding claim **21**, the method further comprising the steps of removing the first MPLS label is anticipated by "*edge router removes the forwarding label*" disclosed on page 8, paragraph 99, lines 1-5 and routing the packet using IPX, Ipv4, Ipv6 or Appletalk protocol is anticipated by "*environment where user is capable of using protocol other than IP, namely protocols such as IPX, or Appletalk*" disclosed on page 4, paragraph 35, lines 1-4.

Regarding claim **22**, the packet forwarded to an external network using PX, Ipv4, Ipv6 or Appletalk protocol is anticipated by "*environment where user is capable of using protocol other than IP, namely protocols such as IPX, or Appletalk*" disclosed on page 4, paragraph 35, lines 1-4.

Regarding claim **23**, the method further comprising the step of attaching a second MPLS label, wherein the packet is forwarded over second MPLS tunnel, and wherein the second MPLS tunnel comprise same label switching routers as the first MPLS tunnel is anticipated by "*the packet is transmitted over the MPLS network while the label value of the label field is pushed, swapped and popped and the packet is transmitted to the destination router*" disclosed on page 3, paragraph 20, lines 5-9.

Regarding claim **24**, the method further comprising the steps of removing the first MPLS label, bridging the packet, and attaching a second MPLS label to the packet, wherein the packet is forwarded over a second MPLS tunnel can comprise same label switching routers as the first MPLS tunnel is anticipated by *"the packet is transmitted over the MPLS network while the label value of the label field is pushed, swapped and popped and the packet is transmitted to the destination router"* disclosed on page 3, paragraph 20, lines 5-9.

Regarding claim **25**, Fig. 12 anticipates *"A communication network"*; the network comprising:

A plurality of first nodes having no actual routing capability is anticipated by *"VLAN 101"* disclosed in Fig 12;

A second node having actual routing capability is anticipated by *"edge router PE A-211"* disclosed in Fig 12; and

At least one interconnection between each first node and said second node is anticipated by *"path between edge router PE A-211 and VLAN 101"* disclosed in Fig 12;

Wherein each first node interacts with said second node over said at least one interconnection between said first node and said second node to provide an emulated routing capability to said first node is anticipated by *"interaction in which a packet is transmitted from a VLAN 101 to PE A 211 enroute to destination VLAN 1501"* as disclosed in Fig 12 or page 8, paragraph 92, lines 1-5.

Regarding claim **26**, one data unit for routing from said first node to said second node on at least one label switched path is established on said at one interconnection

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between said first node and said second node is anticipated by *"path between VLAN 101 and PE A 211"* disclosed in Fig 12.

4. Claim **25** is rejected under 35 U.S.C. 102(b) as being anticipated by Lyon et al (US 5,892,924).

Regarding claim **25**, a plurality of first nodes having no actual routing capability is anticipated by *"node 35₁"* disclosed in Fig. 2a or column 17, line30-36;

A second node having actual routing capability is anticipated by *"node 21a"* disclosed in Fig 2a or column 17, lines 25-46; and

At least one interconnection between each first node and said second node is anticipated by *"link 39₁"* disclosed in Fig. 2a column 17, lines 29-36

Wherein each first node interacts with said second node over said at least one interconnection between said first node and said second node to provide an emulated routing capability to said first node is anticipated by *"when the IP packet is transmitted from LAN backbone 35₁ over the network layer link 39₁, the IP packet is received by the first gateway switch"* disclosed in column 17, lines33-61.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure are Wakayama et al. (US-2001/0049739), Feldman et al. (US-6,055561), Rekhter, Yakov (US-5,917,820), Kalmanek et al. (US-6,711,152) and Rekhter et al. (US-6,525,056).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Puneet Bhandari whose telephone number is 571-272-2057. The examiner can normally be reached on 9.00 AM To 5.30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Puneet Bhandari
Examiner
Art Unit 2666

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